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Social Expenditures as a Political Cue Ball? OECD Countries under Examination

Berlin, March 2007

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Social expenditures as a political cue ball?

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Abstract:

This paper examines how policy affects social expenditures. Analyzing an OECD panel from 1980 to 2003, five political variables are tested: Election- and pre-election years, the ideological party composition of the governments, the number of coalition partners and the fact, if the ruling government has a majority in parliament or not (minority government). I find that neither of these variables have an impact on social expenditures using different model set-ups. The influence of national governments seems to be limited by the globalization, which indeed impairs social expenditures.

Keywords: social expenditures, electoral cycles, partisan politics, globalisation

JEL Classification: D72, H50

1 Introduction

The analysis of social expenditures is a well known issue in empirical research. In times of the welfare state, social expenditures rise (see Figure 1). However, it is not that trivial why. Hence researchers still look for respective explanations. The current paper focuses on the impact policy might have on social expenditures. However, this question causes the general caveat how politicians are actually able to influence economic outcome. The latter might be determined by external factors, e. g. the globalisation. But exactly this induces an interesting empirical question, as the globalisation itself has potential impacts on social expenditures. Theoretically, it affects social expenditures by two counteracting effects. On the one hand, the internationalisation of the economy causes tax competition and thereby reduces the size of government and finally spending for social affairs ("efficiency effect"). On the other hand, the so called "compensation effect" increases social expenditures because the national governments try to protect their citizens against the risks of the globalization (e. g. Rodrik (1998)). Hence it is an empirical question in the current literature to test for the structural impacts of the internationalization of the economy. Kumpmann (2004) finds in an OECD panel from 1980 to 2001 that social expenditures decrease the higher the international trade of a respective country. However, foreign direct investment does not matter at all. Dreher (2004) analyses an unbalanced OECD panel from 1970 to 2000. He does not get any evidence that the globalization affects social expenditures. Vaubel (2005) finds that social expenditures increase the higher the import quota, but also that constraints to the capital movement are insignifcant in the period from 1984 to 1995. Results change in a cross-section analysis from 1990 to 1997.

Furthermore, the ideological party composition of the government is an explanatory variable of particular interest. While Vaubel (2005) finds that left governments increase social expenditures, Dreher (2004) cannot confirm this prospect. Iversen (2001) examines government transfers (including social security transfers) controlling for the impact of partisan politics in a panel of 15 OECD countries from 1961 to 1993. Regarding this kind of expenditure, he does not find that parties matter. Kittel and Obinger (2002) analyze social spending in a panel of 21 OECD countries from 1982 to 1997, review and discuss the existing literature and thereby provide an important paper in the current debate. Overall, they get weak evidence for the partisan approach. Potrafke (2006a) examines the allocation of public expenditures in a panel of 15 countries from 1990 to 2004. Thereby the impacts of the

following five political determinants are tested: Election- and Pre-Election years, the (ideological) party composition of the governments, the number of coalition partners and the fact, if the ruling government has a majority in parliament or not (minority government). The expenditures are grouped by the so called COFOG classification and one of the categories describes spending for "social protection". Interestingly, this category is not at all affected by the political variables.

This paper analyses if policy causes the rise of social expenditures – controlling for the impacts of the globalization. In extension to prior research, I test for the impact of the five political variables first applied in Potrafke (2006a). The set of political variables is extended with respect to time and further single countries. Besides, the analysis refers to an updated OECD panel data set (SOCX) that provides continuous data of social expenditures for 20 OECD countries from 1980 to 2003. Thereby the social expenditure data are produced in a unique fashion taking care of the heterogeneity between the single countries. The remainder of the paper is organized as follows: Section 2 provides the institutional background originating from the theory of political economics. Section 3 presents the data. In section 4 the empirical model is set up, the political variables are described and suitable panel data methods are briefly discussed. Section 5 reports the estimation results and section 6 concludes.

2 Institutional Background

The issue of this paper is to test for the effects of election and pre-election years, the ideological party composition as well as the type of government on social expenditures. The impacts of these variables on economic policy stem from a huge and model based literature of political economics. In this paper, my emphasis is not to find evidence for a single theoretical model. Instead I will very briefly repeat the main ideas of respective (well known) theoretical work establishing a basis for the following empirical analysis.

First, the political business cycle approaches and the partisan theory clarify how politicians try to influence economic outcome. One implication of the theories by Nordhaus (1975) and Rogoff and Sibert (1988) and others is that all the politicians will do the same policy. Ideology does not matter. Policies will converge. In addition, they imply a particular pattern between elections on the one hand and the impacts of economic policy on the other hand. Nordhaus (1975)' opportunistic school asserts that politicians fool the public just to win

elections. They will boost the economy right before elections. The rational political business cycle theory by Rogoff and Sibert (1988) and others criticizes the modelling by adaptive expectations and introduced rational expectations instead. In this approach, information asymmetries play a role as a source of the electoral cycles. The political incumbent tries to exploit his information advantage by signalling his economic competence before the elections. Therefore, I will conclude from these approaches that Election and Pre-Election years will affect social expenditures so that the preferences of the median voter are fulfilled.[1] I expect higher social expenditures before elections.

In contrast, the partisan approach focuses on the strong impact of party ideology. As a result, platforms and policies will not converge. Instead, right and left politicians will provide different policies by concentrating on the preferences of their partisans. The left party appeals more to the labor base and promotes expansionary policies, whereas the right party appeals more to capital owners and is therefore more concerned with keeping inflation down. This holds for both sub-approaches of the partisan theory - for the classical one installed by Hibbs (1977) as for the rational one developed by Alesina (1987). Therefore my prospect is that the party composition of the governments affects social expenditures.[2] I expect higher social expenditures under left than right governments.

Another political determinant stems from the literature of fiscal policy. It arises from the "common pool problem" discussed e. g. by Weingast et al. (1981) and implies that decision costs increase with the number of decision makers. Hence the amount of social expenditures is expected to be higher the more parties form a government. As coalition partners also have to find agreements how much they will spend for social affairs, I expect that the type of government, namely the number of coalition partners as well as the fact if the ruling government has a majority in parliament (minority government) affect social expenditures.

[1] Note that there is no explicit assignment between the two business cycle theories and the impact of election and pre-election years. Nordhaus (1975) does not necessarily imply that only election years matter as well as the one by Rogoff and Sibert (1988) is also somehow related to the impact of election years.

[2] This implies that there is divergence of policies and platforms. Theoretically, in a simple two party model, ideology must over compensate the vote maximizing effect in this case. In a multi party model, manifoldness and traditions of the parties are assumed to avert policy convergence. See e. g. Mueller (2003): Chapters 11-13 and Persson and Tabellini (2000): Chapters 3 and 5 for an overview of the respective fundamental literature on party competition. The current paper is not eligible to discuss the impact of ideology, what it means or where it comes from.

Beyond this, I will not discuss other impacts and interactions[3] any further. Kittel and Obinger (2002) review the literature with any pros and cons about national political influences on economic issues due to the globalisation etc. and take institutional impacts into account. Garrett (1998: Chapter 2) discusses in detail how domestic policy might work in the global economy. The aim of the current paper is that national policy might matter and to test for it.

3 Data

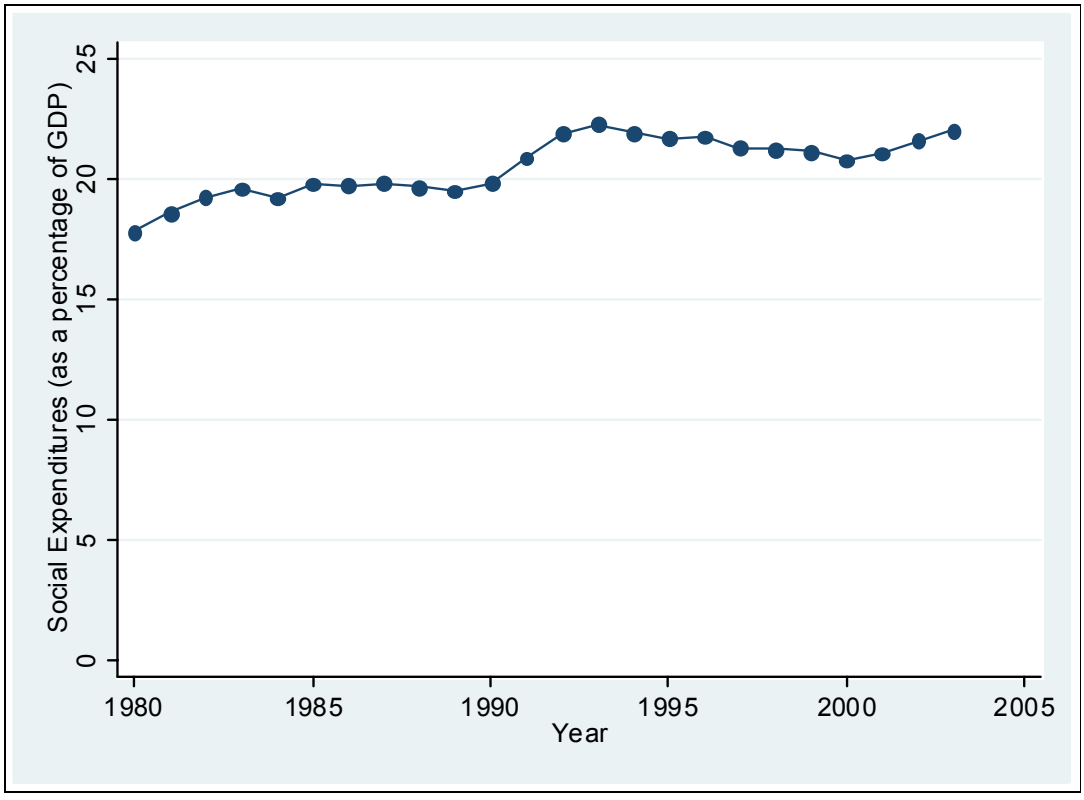
The data set contains yearly data for social expenditures (as a percentage of GDP) of 20 OECD countries (see Figure 1). The countries included are Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Portugal, Spain, Sweden, Switerland, United Kingdom and the USA for the period from 1980 to 2003. The panel is balanced in this constellation.[4] I will use them as dependent variables of the econometric model presented in the following section. The data sets are provided by the OECD Social Expenditure database (SOCX). However, there might be an important caveat against the examination of social expenditures across countries: The social benefits and above all their classification differ from country to country. But exactly this problem is tackled by the OECD. They include transfers with respect to nine different fields in "Total expenditures" and define it as follows: "Social expenditure is the provision by public and private institutions of benefits to, and finanacial contributions targeted at, households and individuals in order to provide support during circumstances which adversely affect their welfare, provided that the provision of the benefits and financial contributions constitutes neither a direct payment for a particular good or service nor an individual contract or transfer." (OECD (2007)). Hence, one might be aware of this heterogeneity problem across the countries, but using the SOCX seems to be the best procedure analysing social expenditures in a cross-country study.

[3] Interactions between the ideological party composition of the government and the number of coalition partners could be considered in more detail. But then, the judging of respective coalition types becomes much more complicated and further assumptions would have been made.

[4] Data for Austria, the Czech Republic, Hungary, Iceland, Korea and Poland are available from 1990. For Mexico there are data from 1985 to 2003 and for Norway from 1988 to 2003 without gaps. To keep the panel balanced, I do not include these countries.

The time series properties of the single series cannot be determined in a serious statistical way. Any unit root test is inapplicable because of too few observations. However, this does not change the properties of the series, of course. In other words, in case of instationarity of the series, they will remain instationary, although only 24 periods in time are considered. Hence, one would end up with a spurious regression in a model using levels instead of first differences. From other and above mentioned empirical research we know that expenditure series are mostly identified as I(1) processes. Thus, I will also use first differences in the current paper.

Figure 1
Social Expenditures (as a percentage of GDP) from 1980 to 2003; average of the 20 OECD countries examined in the current paper



Source OECD (2007): Social Expenditure Database (SOCX 2007)

4 The empirical model

4.1 Model set up

The basic econometric panel data model looks as follows:

$$\Delta\log \text{Social Expenditures}_{it} = \beta_0 + \beta_1 \Delta\log \text{Gross Domestic Product}_{i,t-1}$$
$$+ \beta_2 \Delta\log \text{Old Age Population}_{it} + \beta_3 \Delta\log \text{Unemployment}_{it} + \beta_4 \Delta\log \text{Trade}_{it}$$
$$+ \beta_5 \Delta\log \text{Foreign Direct Investment}_{it} + \delta_j \text{Political Variable}_{ijt} + u_t \quad (1)$$

where the dependent variable $\Delta\log$ Social Expenditures$_{it}$ denotes the first differences of the change in social expenditures. I follow the related studies to include as explanatory variables for control purposes: The lagged first differences of the change in GDP ($\Delta\log$ Gross Domestic Product$_{i,t-1}$), the change in the number of the population with age 65 and older ($\Delta\log$ Old Age Population$_{it}$), the change in the unemployment rate ($\Delta\log$ Unemployment$_{it}$), the change in the trade per capita for goods and services ($\Delta\log$ Trade$_{it}$) and the change in the Foreign Direct Investment ($\Delta\log$ Foreign Direct Investment$_{it}$).[5] For this reason, the general economic situation, the demographic development and the situation of the labour market are taken into account. Note that GDP in period t forms the denominator of the dependent variable. Thus the model uses the GDP growth in period t-1 as explanatory variable to avoid endogeneity problems. Furthermore, the trade performance (sum of imports and exports) is included to control for effects of foreign trade interdependences on social expenditures. For the same reason foreign direct investment is included, measured as the sum of the in- and outflow of foreign direct investment in the respective year. In contrast to previous studies[6], I do not include their ratios to GDP but absolute values to avoid endogeneity problems. Moreover, data for foreign direct investment are not available for all countries.[7] That is why its inclusion results in smaller samples. I will report the different specifications. Lastly, several panel data approaches are applied to fortify the robustness of the results.

[5] The data sources for the explanatory variables are: GDP (OECD Outlook Data Base), Old Age Population (Worldbank), Unemployment rate (OECD Outlook Data Base and ECONSTAT), Trade (OECD Outlook Data Base), Foreign Direct Investment (UNCTAD).

[6] See e. g. Garrett and Mitchell (2001)

[7] Data are incomplete for Finland, Greece, Ireland, New Zealand and Switzerland. Belgium and Luxembourg are totally excluded in these regressions.

4.2 Political variables

Most important, Political Variable$_{ijt}$ describes the political variables, on which this study focuses listed in Table 1.

Table 1
Political variables

Political Variable
Election$_{it}$
Pre-Election$_{it}$
Ideology$_{it}$
Size of Coalition$_{it}$
Minority Government$_{it}$

The variables Election$_{it}$ and Pre-Election$_{it}$ take the exact timing of the elections into account. Following Franzese (2000), they are calculated as

$$\text{Election}_{it} = [(M-1) + d/D]/12$$

where M is the month of the election, d is the day of the election and D is the number of days in that month. In pre-election years the variable is calculated as

$$\text{Pre-Election}_{it} = [12 - (M-1) - d/D]/12$$

In all other years, their values are set to zero. Therefore, I directly control for fluctuations and the fact, that the election dates differ between as well as in the single countries. The election dates are reported in Appendix A.1.

The most important challenge for the partisan test in an OECD panel is the heterogeneity of the parties and parliamentary systems in the single states. Hence the question comes up what kind of government could be labelled left or right – especially when there are more than two parties in the government with different ideological roots. Researchers often use the index by Budge et al. (1993) and updated by Woldendorp et al. (1998) and (2000) as a measure of the governements' ideological positions. It locates the cabinet on a left-right scale with values between 1 and 5. It takes the value 1 if the share of right-wing parties in terms of seat in government and their supporting parties in parliament is larger than 2/3, 2 if it is between 1/3 and 2/3. The index is 3 in a balanced situation if the share of centre parties is 50 per cent, or if

the left- and right-wing parties form a government together not dominated by one or the other side. Corresponding to the first two cases it takes the values 4 and 5 by a dominance of the left-wing parties likewise defined. Following this procedure, I construct an ideological index for the 20 examined countries in the period from 1980 to 2003. Appendix A.2 provides all the values of this index. Consequently, I get a uniform quantitative measure. Finally, I label years in which the government changed corresponding to the one that was in office for the longer period, e. g. when a right government followed a left one in August, I label this year as left.

At last, the type of government is tested by two variables whereas previous studies used just one variable. Roubini and Sachs (1989) constructed an index of power dispersion which distinguishes between the number of coalition partners as well as if the government was a minority government. Unfortunately, this procedure mixes the quantitative feature of the number of parties in the coalition with a qualitative feature, namely if this government has a majority in parliament or not. Therefore, I first install a variable controlling for the number of parties in government. It ranges from 0 (no coalition) to 2 (huge coalition):

0 one-party majority parliamentary government;
1 coalition parliamentary government with two-to-three coalition partners;
2 coalition parliamentary government with four or more coalition partners;

Further I use a simple dummy variable to control for the impact of minority governments.[8] It takes on the value "1" when the government does not have a majority in parliament and zero otherwise. Thus, both variables referring to the government type increase with higher decision costs of the governments.

In comparison to other studies testing for the impact of different political variables, I include all of them in one regression. Running separate regressions with each political variable would contradict the theory that they all have an impact and cause omitted variable bias.

4.3 Suitable panel data methods

Finally, the potential panel data estimation methods suitable in the current framework must be discussed. First, taking first differences due to stationarity reasons of the single series

[8] The collection of the respective values is a bit challenging. As before, I report all the variables in the appendix to make this research as transparent as possible. I compared the data given in Woldendorp et al. (2000), Beck et al. (2001) and have contacted single Statistical State Offices as well Government Offices to provide the most accurate values.

eliminates time-invariant fixed effects. Hence, the common least squares dummy variable estimator (fixed-effects) could be useless. But there could also be time trends in each country, so that first differencing just eliminates the time-invariant country effects, but not the individual time components. Thus, it might also be sensible to apply fixed-effects on the first differences. Random effects could be present, too (see e. g. Greene (2003), Chapter 13 for the estimation of panel data models).

Alternatively, the model could be estimated using a dynamic panel data framework. However, in the context of dynamic estimation, the common fixed-effect estimator is biased. As Behr (2003) states, the estimators taking into account the resulting bias can be grouped broadly into the class of instrumental estimators and the class of direct bias corrected estimators. In accordance with large sample properties of the GMM methods, e. g. the estimator proposed by Arellano and Bond (1991) will be biased in the current framework with N = 20. That is why bias corrected estimators might be a good choice. Bruno (2005) presents a bias corrected least squares dummy variable estimator for dynamic panel data models with small N.[9] This paper wants to test for the impact of the political variables in a robust econometric framework. That is why the following section will present results of different estimation methods and thereby clarify the sturdiness of the results.

5 Results

Table 2 shows the regression results of different estimation procedures and distinguishes between the regressions with and without foreign direct investment as explanatory variable.[10] It reports the coefficients and t-ratios for every single equation. By interpreting the coefficients, one has to be a bit careful. At first, I take logs of the levels so that the coefficients would reflect elasticities. In addition, I take first differences because of stationarity reasons. Thus, the estimated coefficients report the relative changes of the growth rates of the social expenditures.

[9] Xtlsdvc command in STATA.

[10] The F-Tests that the fixed effects are zero could not be rejected. Accordingly, the LM-Test could not reject the null hypothesis in favour of the random effects model. Hence I report the results of the model with a common constant. Furthermore, I correct for autocorrelation of first order in the residuals using panel error-corrected standard errors (Xtpcse command in STATA).

Table 2
Regression Results. Dependent Variable: Δ log Social Expenditures$_t$

	Common constant, OLS	Xtpcse, AR(1)	Dynamic, bias corrected, Xtlsdvc[11]	Common constant,OLS	Xtpcse, AR(1)	Dynamic, bias corrected, Xtlsdvc
Constant	-0.003	-0.004		-0.0005	-0.002	
	(-0.40)	(-0.43)		(-0.06)	(-0.22)	
Δ log Gross Domestic Product$_{t-1}$	0.142***	0.165***	0.129**	0.121***	0.147**	0.123**
	(3.66)	(3.00)	(2.45)	(3.06)	(2.41)	(2.07)
Δ log Old Age Population$_t$	0.293*	0.274	0.006	0.252	0.234	-0.024
	(1.85)	(1.33)	(0.03)	(1.60)	(1.02)	(-0.10)
Δ log Unemployment Rate$_t$	0.106***	0.101***	0.099***	0.108***	0.101***	0.093***
	(9.80)	(7.55)	(8.87)	(9.02)	(7.17)	(6.94)
Δ log Trade$_t$	-0.050**	-0.052*	-0.033	-0.043**	-0.050*	-0.031*
	(-2.43)	(-1.77)	(-1.53)	(-2.05)	(-1.64)	(-1.64)
Δ log Direct Foreign Investment$_t$				-0.007**	-0.005	-0.007**
				(-2.18)	(-1.54)	(-2.17)
Δ log Social Expenditures$_{t-1}$			0.161***			0.213***
			(3.46)			(4.10)
Election$_t$	0.004	0.004	0.004	0.002	0.002	0.005
	(0.60)	(0.71)	(0.61)	(0.25)	(0.36)	(0.88)
Pre-Election$_t$	-0.002	-0.001	0.001	0.003	0.005	0.008
	(-0.29)	(-0.14)	(0.19)	(0.45)	(0.62)	(0.96)
Ideology$_t$	0.001	0.001	0.003	0.001	0.001	0.002
	(0.51)	(0.35)	(1.20)	(0.39)	(0.29)	(0.75)
Size of Coalition$_t$	-0.002	-0.002	-0.003	-0.001	-0.001	-0.003
	(-0.84)	(-0.68)	(-0.54)	(-0.39)	(-0.15)	(-0.47)
Minority Government$_t$	-0.005	-0.005	-0.009	-0.005	-0.005	-0.005
	(-1.07)	(-0.77)	(-1.20)	(-1.09)	(-0.78)	(-0.67)
R^2	0.2604	0.2313		0.2784	0.2406	
N ×T	460	460	440	390	390	375

t-statistics in parentheses: */**/***: significant at the 0.10/0.05/0.01 level.

Most important, the impacts of the political variables do not change irrespective of the econometric specification[12] (and hence the sample size and composition). In accordance with the political business cycles, I expect politicians to increase social expenditures before elections and affecting the preferences of the median voter. Table 2 does not report any statistical significant effect of election and pre-election years. Hence the results do not confirm any opportunistic behaviour of the politicians. However, interpreting this finding one has to consider the different election cycles in the single countries. This means that e. g. in

[11] The results refer to the Arellano-Bond estimator as initial one and the standard errors are bootstrapped within 200 repetitions.

[12] The null hypothesis of the F-test that all the individual (fixed) effects are zero cannot be reject. Consequently, also the LM-Tests reports that there are no random effects. Hence I estimate a model with a common constant. Interestingly, the political variables do also have no impacts in dynamic panel data specifications using levels instead of first differences.

countries like Australia and New Zealand elections were held every three years. In addition, general elections occurred irregularly when parliaments were dissolved due to political instabilities. Hence, from a long-run perspective, the smaller the distance between single elections dates, the more unlikely are potential effects on social expenditures.

Furthermore, the ideological party composition of the governments does not significantly affect social expenditures in the period from 1980 to 2003. Parties do not matter. This is an interesting finding because it does not confirm the theoretical and intuitive prospects that left governments expand the social sector. However, it is in line with Potrafkes (2006a) current result that parties did not affect expenditures for "Social Protection" from 1990 to 2004. The same holds for the impacts of the coalition size and the fact if the governments have a majority in parliament. The results do not report any significant impacts. The finding, that these political variables do not affect social expenditures, does not at all depend on single countries in the sample. As it is common in the literature, I check the sensitivity of the results to individual countries. Therefore, I rerun the regression in Table 2 excluding one country at a time. None of the results are sensitive to the inclusion of a particular country.

Instead, the results confirm that social expenditures are driven by structural economic indicators. I will discuss the impacts of these variables a bit closer because they seem to interact with the political variables in a sensible way. The higher the international trade of a single country, the lower are social expenditures. This finding is in line with the theoretical prospect of the efficiency effect as well as the current empirical findings. In contrast to previous studies (e. g. Kumpmann (2004)) foreign direct investment, the second globalization indicator – also has a significant negative impact on social expenditures. However, the numerical effect is weaker than the one engendered by international trade. Its direction also confirms the prospects that social expenditures decrease, the higher a country is integrated and linked with international competition. Thus, these findings imply that the "efficiency effect" counterbalances the "compensation effect". National governments do not seem to protect their citizens against the risks of the globalization. But this finding is perfectly in line with that of the political variables this study focuses on. Policy does not matter in the period

from 1980 to 2003, whereas the economic indicators do (unemployment rates strongly affect the rise of the social expenditures).[13]

The results become even more intuitive by running regressions within smaller spaces of time. Testing the impact of the respective variables in the period from 1980 to 1989 (static econometric model), I find that left governments indeed cause higher social expenditures, whereas the influence of the globalization is weaker. Also for further sub samples including the 90ies, parties matter in the expected manner, but the significance of results changes in accordance with the sample size. However, election and pre-election years as well as the type of government do not matter at all. In conclusion, these findings indicate that the impact of national policy on social expenditures declines in time elapsed while the globalization effects become more severe.

Lastly, social expenditures might emerge as a too general measure to test for political effects. In particular, they might ignore political interactions and compensating effects with respect to specific fields in social policy. Previous research has shown that policy affects economic outcome in various ways and it still extremely sensible that it does because otherwise one might doubt the basics of democratic systems. Hence researchers might ask how and why this might be the case. In Potrafke (2006), I stress that it is very important to check the real room of manoeuvre for political activities when respective tests are installed. This does not contradict the meaning of the current study. In contrast, this paper rather contributes to a current strength of literature and illustrates that policy effects are absent when single instruments are difficult to identify.

6 Conclusion

This paper analyses policy effects on social expenditures in OECD countries from 1980 to 2003. The results strongly illustrate that neither election nor pre-election years, nor does the party composition of the governments, nor the coalition size or the fact if the government has a majority in parliament have an impact. But this was different in earlier periods: Left governments indeed caused higher social expenditures. In time elapsed, the impacts of

[13] Moreover, the results imply that the change of the old age population does not help to explain the rise of the social expenditures. However, this might be due to the fact that the demographic change just started in the considered period from 1980 to 2003. Hence the regression result does not necessarily falsify that the increasing share of old age people might cause higher social expenditures.

national governments vanished and the globalization has become more powerful. Further research might examine theoretically how politicians' room of manoeuvre changes in times of the globalization.

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Appendix

A.1 Election dates

Table 3
Election Dates

Australia	**Belgium**	**Canada**	**Denmark**	**Finland**
18-Oct-1980	08-Nov-1981	18-Feb-1980	08-Dec-1981	20/21-March-1983[14]
05-March-1983	13-Oct-1985	04-Sep-1984	10-Jan-1984	16-March-1987
01-Dec-1984	13-Dec-1987	21-Nov-1988	08-Sep-1987	17-March-1991
11-July-1987	24-Nov-1991	25-Oct-1993	10-May-1988	19-March-1995
24-March-1990	21-May-1995	02-June-1997	12-Dec-1990	21-March-1999
13-March-1993	13-June-1999	27-Nov-2000	21-Dec-1994	16-March-2003
02-March-1996	18-May-2003	28-June-2004	11-March-1998	
03-Oct-1998			20-Nov-2001	
10-Nov-2001				
09-Oct-2004				
France	**Germany**	**Greece**	**Ireland**	**Italy**
14-and-21 June 1981	05-Oct-1980	18-Oct-1981	11-June-1981	26-June-1983
16-March-1986	06-March-1983	02-June-1985	18-Feb-1982	14-June-1987
05-and-12-June 1988	25-June-1987	18-June-1989	24-Nov-1982	05-April-1992
21-and-28-March-1993	02-Dec-1990	05-Nov-1989	17-Feb-1987	27-March-1994
25-May-and-01-June-1997	16-Oct-1994	08-April-1990	15-June-1989	21-April-1996
09-and-16-June-2002	27-Sep-1998	10-Oct-1993	25-Nov-1992	13-May-2001
	22-Sep-2002	22-Sep-1996	06-June-1997	
		09-April-2000	17-May-2002	
		07-March-2004		
Japan	**Luxembourg**	**Netherlands**	**New Zealand**	**Portugal**
22-June-1980	17-June-1984	26-May-1981	28-Nov-1981	05-Oct-1980
18-Dec-1983	18-June-1989	08-Sep-1982	14-July-1984	25-April-1983
06-July-1986	12-June-1994	21-May-1986	15-Aug-1987	06-Oct-1985
18-Feb-1990	13-June-1999	03-May-1994	27-Oct-1990	19-Jul-1987
18-July-1993	13-June-2004	06-Sep-1989	06-Nov-1993	06-Oct-1991
20-Oct-1996		06-May-1998	12-Oct-1996	01-Oct-1995
25-June-2000		15-May-2002	27-Nov-1999	10-Oct-1999
09-Nov-2003		22-Jan-2003	27-July-2002	17-March-2002
Spain	**Sweden**	**Switzerland**	**United Kingdom**	**USA**
28-Oct-1982	19-Sep-1982	23-Oct-1983	09-June-1983	04-Nov-1980
23-June-1986	15-Sep-1985	18-Oct-1987	11-June-1987	06-Nov-1984
29-Oct-1989	18-Sep-1988	20-Oct-1991	09-April-1992	08-Nov-1988
03-March-1993	15-Sep-1991	22-Oct-1995	01-May-1997	03-Nov-1992
03-March-1996	18-Sep-1994	24-Oct-1999	07-May-2001	05-Nov-1996
12-March-2000	20-Sep-1998	19-Oct-2003		07-Nov-2000
14-March-2004	15-Sep-2002			02-Nov-2004

[14] I take the average of the two dates (for France respectively).

A.2 Party composition and ideological position of the governments

In **Australia**, a right-wing coalition consisting of the Liberal Party (LIB) and the National Country Party (CNT) ruled till 1982. Then there was a single party government of the left Labor Party (ALP) up to 1995. Afterwards, a right-wing coalition of the LIB and the National Party (NP) was in power. **Belgium** was reigned by huge coalition governments. In 1980 and 1981, the coalition consisted of right as well as left parities. From 1982 to 1987 there were no left-wing parties in government. Then left parties joined again till 1999. Since 2000, the governments were formed by left parties exclusively. The left Liberal Party (LIB) ruled in **Canada** till 1984. Then from 1985 to 1993 the Progressive Conservative Party (CON) was in power – during the first years with a tremendous majority in parliament. Afterwards the Liberals took over again. In **Denmark**, the social democrats ruled up to 1982. Then there were right-wing governments till 1992. Afterwards a coalition consisting of left- and right-wing parties ruled. From 1997 to 2001 there was a left government. Then the right coalition consisting of the Liberal Party and the Conservative People Party came in office up to 2005. In **Finland**, parties of the left and the right were in government till 1990. From 1991 to 1994 there was a right-wing coalition, whereas till 1995 left and right parties formed the government again. There was a right government in **France** in 1980 (Prime Minister member of the UDF). Then the socialists were in power up to 1985, followed by a right coalition in 1986 and 1987. Afterwards, the socialists leaded a left coalition government up to 1992. Then the right RPR (in coalition with the UDF) was in office for four years. From 1997 to 2001 there was again a left government, followed by a right one in 2002 (in September 2002 the RPR and DL joined to the UMP). There were only single party governments in **Greece**. The right (ND) was in power up to 1981, then the left (PASOK) took over up to 1989. There were two elections in 1989. As the right could not form a government after the first election in June, I label this year as left. Then there was a right government from 1990 to 1993. The left took over up to 2003. The Social democrats (SPD) and the liberal FDP ruled in **Germany** up to 1982. Then the conservatives reigned from 1983 to 1998 – also in coalitions with the FDP. Then, for the first time on the federal level, a coalition of the social democrats and greens was

in office. The Fiana Fail (FF) formed a single party government in **Ireland**[15] in 1980. In 1981, there was a coalition consisting of the Fine Gael (FG) and the Labour Party (LP), whereas the FF took over in 1982 again. From 1983 to 1986 there was again a FG/LP coalition. Then the FF formed a coalition with the Progressive Democrats (PD) till 1992. In 1993 and 1994 a FG/LP coalition ruled. In 1995 and 1996 the Democratic Left (DL) joined the former coalition. Finally, there has been a right wing FF/PD government since 1997. In **Italy**, the governments consisted of several parties. Most important, Christian democrats (DC) as well as socialists (PSI) were in government till 1993 (in 1987 only DC for some months), so that I label them all as grand coalitions. In 1994, there was a coalition of only right parties. I label Dini's cabinet in 1995 as centre. Further, the coalitions up to 2000 also consisted of parties with different ideological roots – left and right. Finally, from 2001 to 2005 Berlusconi's governments were definitely right. The right Liberal Democratic Party (LDP) dominated politics in **Japan**. The LDP formed a single party government up to 1983. From 1984 to 1986 there was a right-wing coalition together with the Shin-Jiyu-Kurabu Party. Then the LDP reigned alone again up to 1993. (Note that the huge coalition of seven parties excluding the LDP was in office during the second half of 1993 and the first months of 1994. Hence, in accordance with the rules to set up the index, it is not mirrored here). Then a grand coalition consisting of the LDP, Shakai-to and Sakigake Party was in office from 1994 to 1996. In 1997 and 1998 the LDP reigned alone. Since then, the New Komeito and the New Conservative Party joined several right-wing coalitions. In **Luxembourg** a right-wing coalition of the Christian Social People's Party (CSV) and the Democratic Party (DP) was in power till 1984. Then a coalition of the Christian Social People's Party (CSV) and the Socialists (LSAP) ruled up to 1998. Then there was again a conservative government of the CSV and the DP till 2003. A right-wing coalition consisting of the Christian Democratic Appeal (CDA) and the People's Party for Freedom and Democracy (VVD) reigned in the **Netherlands** till 1981 and from

[15] Ordering the Irish parties on a left right scale is not that straightforward. Therefore I will give some background information about the Irish party system following Mair and Weeks (2005) to justify my codings. Mair and Weeks (2005), p. 136 state that: "Unlike the European examples, the Irish party system is not structured on an unequivocal left-right social cleavage. The two main parties, Fianna Fail (FF) and Fine Gael (FG), tend to converge around the centre of the ideological spectrum, often crossing sides between centre left and centre-right, or occupying both simultaneously". Furthermore, the FF seems generally to be best regarded as "secular conservative" and the FG as conventional Chrisitan democratic. Most important, distinguishing the single coalitions on a left-right scale becomes easier by considering the roots of the respective coalition partners: There is a left Labor Party (LP) and a right Progressive Party (PD). Hence the only questionable decision might be to label the two years of FF government in 1980 and 1982 as right, but the regression results only change marginally due to this coding, of course. For further information about the ideological changes of the parties in time elapsed, see Mair and Weeks (2005).

1983 to 1989. In 1982 a grand coalition consisting of the Christian Democratic Appeal (CDA), the Labour Party (PvdA) and the (D66) and afterwards in without the PvdA was in power. From 1990 to 1994 a grand coalition consisting of the CDA and the PvdA ruled till 1993. From 1995 to 2002 the PvdA leaded a left government coalition. A right government was in office from 2003 to 2005. The right National Party (NP) formed a single party government in **New Zealand** till 1984. Then the left Labour Party (LAB) ruled from 1985 to 1990, and the NP took over again. Till 1996 the NP formed a coalition wit the New Zealand First Party. There was a left-wing coalition consisting of the LAB and a party called Alliance till 2000. **Portugal** was reigned by a right coalition up to 1982. Then, there was a "center block" government in 1983 and 1984, and a right-wing coalition government was in power again. From 1988 to 1995 there was a right single party government (PSD). From 1996 to 2001 the socialists (PS) took over. Afterwards a coalition of the PSD and the Social Democratic Center-Popular Party (CDS-PP) ruled. In **Spain**, a right government (UCD) ruled till 1982. Then the socialists were in power up to 1995 and a right government (PP) followed. There was a right-wing coalition in **Sweden** from 1980 to 1982. Then the Social Democratic Labor Party (SAP) reigned till 1991. Then, there was a right collation till 1994. Since 1995, the SAP was in power again. The political system in **Switzerland** is a bit different as it contains many elements of a direct democracy. However, there is a federal parliament and government respectively. Since 1980, it has consisted of left- and right-wing parties. There is a two party system in the **United Kingdom** in which the conservatives ruled from 1980 to 1997 and then the labour party took the power. In the **USA**, the Democrats were in power in 1980, followed by the Republicans up to 1993. Then the Democrats were leading up to 2001, and the Republicans took over again.

Table 4
Ideology

	‘80	‘81	‘82	‘83	‘84	‘85	‘86	‘87	‘88	‘89	‘90	‘91	‘92	‘93	‘94	‘95	‘96	‘97	‘98	‘99	‘00	‘01	‘02	‘03
Australia	1	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2
Belgium	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4
Canada	4	4	4	4	4	1	1	1	1	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4
Denmark	4	4	4	2	2	2	2	2	2	2	2	2	2	3	3	3	3	4	4	4	4	4	2	2
Finland	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3
France	2	4	4	4	4	4	2	2	4	4	4	4	4	2	2	2	2	4	4	4	4	4	2	2
Germany	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4
Greece	2	2	4	4	4	4	4	4	4	4	2	2	2	2	4	4	4	4	4	4	4	4	4	4
Ireland	2	3	2	3	3	3	3	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2
Italy	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	4	4	4	4	4	2	2	2
Japan	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	2	2
Luxembourg	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2
Netherlands	2	2	3	2	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	2
New Zealand	2	2	2	2	2	4	4	4	4	4	4	1	1	1	2	2	2	2	2	2	4	4	4	4
Portugal	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	2	2
Spain	2	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2
Sweden	2	2	2	4	4	4	4	4	4	4	4	4	2	2	2	4	4	4	4	4	4	4	4	4
Switzerland	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
UK	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4
USA	4	2	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	2	2	2

(with 1 = very powerful right-wing government; 2 = right-wing government; 3 = left- as well as right-wing parties in government; 4 = left-wing government)

Table 5
Index Number of coalition partners

	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03
Australia	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Belgium	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Canada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Denmark	0	0	0	2	2	2	2	2	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1
Finland	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1
France	1	1	1	1	1	0	1	1	0	0	0	0	0	1	1	1	1	2	2	2	2	2	1	1
Germany	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Greece	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	0	1	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Italy	1	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2
Japan	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
Luxembourg	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Netherlands	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
New Zealand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Portugal	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Spain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sweden	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0
Switzerland	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
UK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(with 0 = one-party majority parliamentary government; 1 = coalition parliamentary government with two-to-three coalition partners; 2 = coalition parliamentary government with four or more coalition partners)

Table 6
Dummy Minority Governments

	‘80	‘81	‘82	‘83	‘84	‘85	‘86	‘87	‘88	‘89	‘90	‘91	‘92	‘93	‘94	‘95	‘96	‘97	‘98	‘99	‘00	‘01	‘02	‘03
Australia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Denmark	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1
Finland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
France	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	1	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0
Japan	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Zealand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0
Spain	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0
Sweden	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Switzerland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(with 1 = government does not have a majority in parliament and 0 otherwise)